

Full HD Digital Satellite Receiver
Digital Innovation Life

Sky Sat Mini HD PVR Ready



User's Manual

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Precautions

1. Important Safety Instructions

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not reverse the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



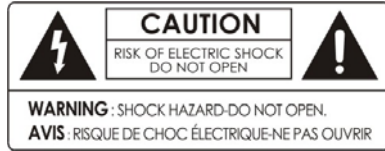
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING : *To Prevent fire or shock hazard do not expose the set to rain or moisture.*

2. Notice

- These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.
- The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

- The mains plug is used as the disconnect device. The disconnect device shall remain readily operable.



To reduce the risk of electric shock, do not remove the cover (or back).
No user serviceable parts are inside.
Refer servicing to qualified service personnel.



The Lightning Flash with arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product enclosure that may be of sufficient magnitude to constitute a risk of shock to persons



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product

3. Copyright

This manual is protected by copyright laws.
Copy, use and reproduction of this manual in part or whole without Manufacturer's prior written approval are prohibited.

4. Disclaimer

The manufacturers, distributors and agents are not liable to any kind of damage caused by the use of the information contained in this manual.
The instruction and descriptions which this manual contains are based on the time of this manual's production.
The manufacturer constantly updates it with new functions and technology.
All the specifications are subject to change without prior notice.

5. Trademarks



HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC



Manufactured under license from Dolby Laboratories.
Dolby and the double-D symbol are trademarks of Dolby

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Before You Begin

1. Main Features

- ✓ Full HD Satellite PVR receiver
- ✓ Supports H.264/MPEG4/MPEG-2 (HD/SD), DVB-S2 Compliant
- ✓ Powerful Compatibility through Embedded Linux OS
- ✓ Time Shifting, Recording & Playback with External Storage Devices (USB 2.0)
- ✓ Simultaneous Recording of 3 Services and Watching 2 others (PIP)
- ✓ USB 2.0 Host ports (MP3 Player & JPEG Viewer)
- ✓ Powerful Extended EPG with Event Recording
- ✓ Picture-in-Picture (PIP) Supported
- ✓ HDMI Video & Audio Output (576i, 576p, 720p, 1080i, 1080p)
- ✓ 10/100 base Tx Ethernet port
- ✓ Supports Wi-Fi via external USB device
- ✓ 1 Smart card reader and 1 Common Interface Slots
- ✓ Supports Various Media File Format Playback (Xvid file Playback)

- ✓ Intelligent Blind scan for both SD and HD TV & Multi Satellite Search
- ✓ Multi-LNB Controlled by DiSEqC Control Version 1.0, 1.1, 1.2 and USALS
- ✓ Support EPG (Electronic Program Guide)
- ✓ High Definition On-Screen Display with Full Color & Resolution
- ✓ Favorite Service Groups
- ✓ Powerful Service Control by Favorites, Lock, Skip, Move and Delete
- ✓ Service Sorting by Alphabet, Transponder and CAS
- ✓ Multi-language Supported (OSD & Menu)
- ✓ Teletext / Subtitles Support
- ✓ Maximum 10,000 Services Programmable
- ✓ Parental Lock / System Lock / Installation Lock
- ✓ CVBS Video & Audio Output via RCA
- ✓ Optical Output for Digital Audio(SPDIF)
- ✓ Software & Service Database update via USB and Ethernet port

2. Accessories

User's Manual



Remote Control



AAA size Batteries



HDMI Cable



ADAPTOR



TV mount bracket



IR extension (Option)



RCA cable (Option)

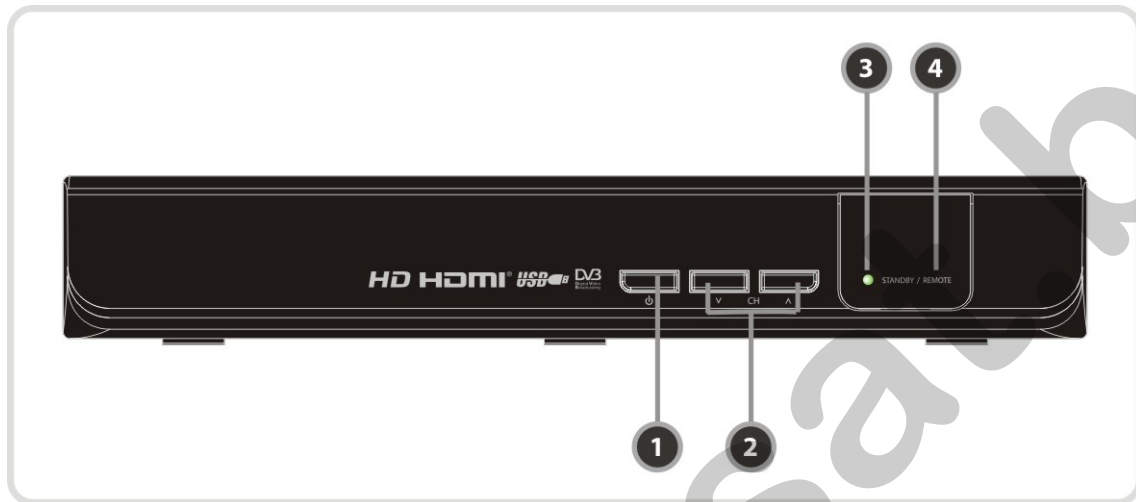


NOTE : If any accessories listed above are missing, contact the sales representative where you purchased this unit.

It is ready to be mounted behind of the TV. Use the screws provided to hold the components in place.

Hardware Description

1. Front Panel Configuration



1. POWER Button:

Press to switch between STANDBY and POWER ON modes.

2. CH Up/Down Button:

Press to change services in normal mode, to move the highlighted-bar UP/DOWN in menu mode.

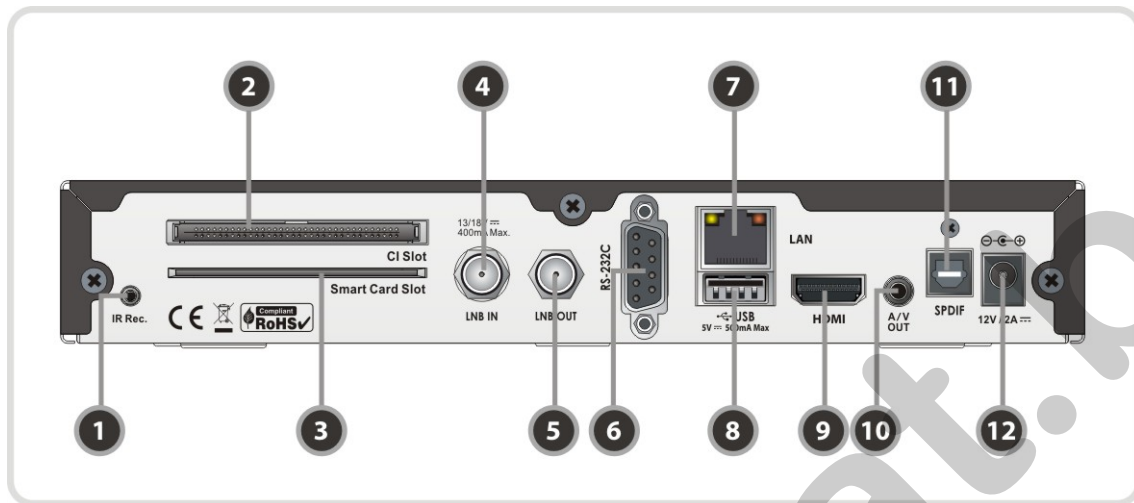
3. STANDBY / REMOTE Indication LED (RED / GREEN):

The LED (RED) lights on in standby mode. / The LED (GREEN) lights on when a key on the Remote Control is pressed.

4. Remote Sensor:

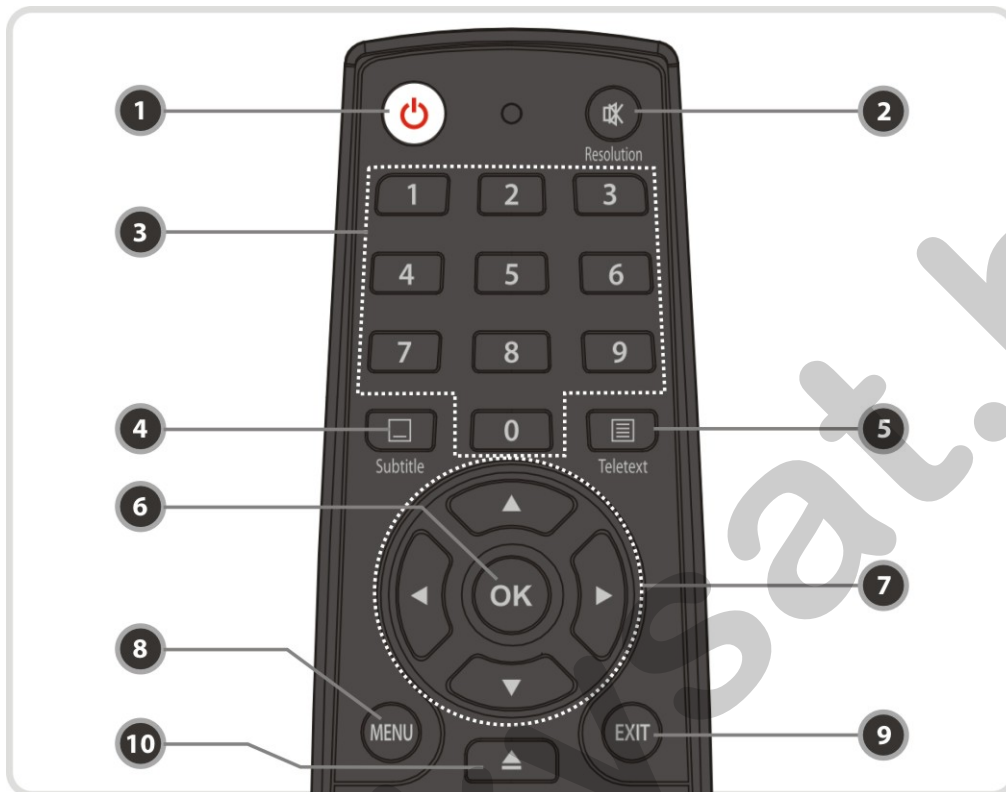
Receives signal from remote controller.

2. Rear Panel Configuration



1. **IR extension** : The 2.5mm mini plug is connected to the "IR Rec" jack to use IR extension when HS 7110 is mounted with optional bracket. (Front remote sensor will not be operated when IR Extension is connected)
2. **PCMCIA** : To receive other pay-tv service you need a CA-Module(Viaccess, Irdeto, Nagravision, etc.) and a smart card from the service provider.
3. **SMART CARD READER** : Insert smart card for encrypted service access.
4. **LNB IN**: Use to connect a satellite antenna.
5. **LNB OUT**: Use it when connecting to another STB for loop-through.
6. **RS-232C** : Serial port for firmware update and data transfer.
7. **Ethernet** : Local area network port for direct computer connection.
8. **USB** : Use it when connecting to external USB storage device.
9. **HDMI** : Connects to the TV by using a HDMI cable for the best quality picture and audio.
10. **A/V OUT** : Connects to the TV or VCR using a optional RCA cable (Stereo audio output / White, Red, Composite video output / Yellow)
11. **SPDIF** : Connects to the audio system using a S/PDIF cable. (digital audio)
12. **A/C power cable socket** : Connects to A/C power cord.

3. Remote Control Unit



1. **POWER** : Turns the STB On/Off.
2. **MUTE / Resolution** : Turns the sound On/Off. / To select the resolution format press and hold Resolution button. You will see the resolution menu. Each time you press the **Resolution** button, the resolution changes in the following sequence: **576i > 576p > 720p > 1080i > 1080p** by pressing the Exit button it turns the sound On/Off again.
3. **Numeric** : Controls the numerical operation and service numbers directly.
4. **Subtitle** : To show multilingual subtitle.
5. **Teletext** : To show the digital teletext.
6. **OK or Service List** : Show the service list in non-menu mode and select an item or confirm in menu mode.
7. **ARROW Buttons**
 - a. **Up & Down Buttons** : To change the value of a selected item with preprogrammed values in menu.
 - b. **Left & Right Buttons** : To move the cursor left and right in menu.
8. **Menu** : To enter the main menu or to move to the previous menu.
9. **EXIT** : Exit from the menu or pop-up window.
10. **Play List** : To show the file list in the USB Storage Device or Network Storage Device.

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11. Favorite : To display the satellite group and the favorite groups.

12. EPG(Electronic Program Guide) : Show the TV/Radio program guide.

13. Recall : Moves to previous service.

14. Volume Up & Down : To change the Volume.

15. Play / Time shift : Display the progress bar of playback when no progress bar is displayed. Start playback with normal speed. Return to normal speed from trick mode.

16. Channel Up & Down: To change service channel.

17. Pause : This key is used to pause the video. Press once more to resume the video.

18. Rewind : Rewinds at high speed. Each time you press this button the rewind speed is increased.

19. STOP : To stop time shifting, play back or recording.

20. Fast Forward : Fasts forward at high speed. Each time you press this button the speed is increased.

21. Previous File : To play the previous MP3 file in MP3 play mode. This button is also used to jump back to beginning of recording during a playback.

22. Recording : To start Recording.

23. Next File : To play the next file. This button is also used to jump to end of recording during a playback.

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24. Color Buttons

- a. RED** : Used for special function in menu. RED key is used to sort lists in service list or go to previous day search in EPG or make/delete the current position as a bookmark.
- b. GREEN** : Used for special function in menu. Green key is used to set favorites setting in service list or go to the next bookmark position.
- c. YELLOW** : Used for special function in menu. Yellow key is used to find service in service list or change the audio track.
- d. BLUE** : Used for special function in menu. Blue key is used to set service list option in service list or display **Multi-Picture**.

25. Page Up& Down : Move to the next or previous page if more than one page are available. This button also is change the location of sub picture in PIP.

26. TV/RADIO : Switches between TV and Radio.

27. Information : Shows the information of the current program. If you press one more, detail information box will be shown.

28. PIP Buttons

- a. PIP(Picture in Picture)** : To set PIP window.
- b. PIP Swap** : Switching between main-picture and sub-picture
- c. PIP(Picture in Picture) Service List** : To shown the sub-picture service list.

Connecting diagram

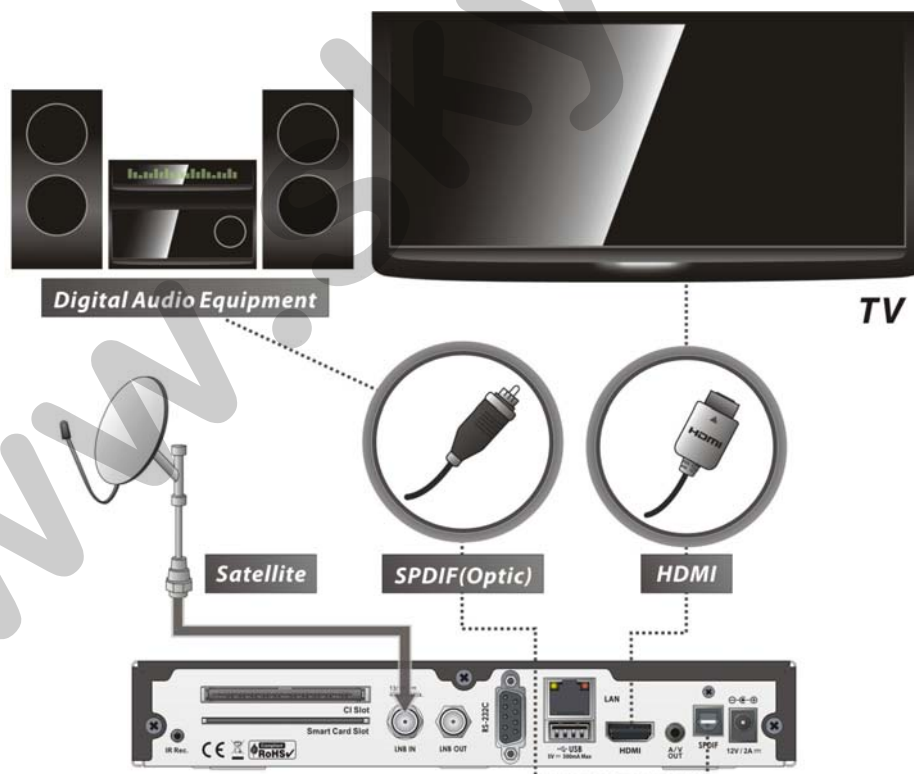
1. Receiver to A/C power

- Connect the A/C power cord between A/C power cord socket of receiver and A/C outlet.



2. Receiver to TV with Digital A/V Output

- Connect the HDMI Cable to the HDMI Connector of the TV.
- Connect SPDIF to Digital audio input of the equipment(Digital Audio)



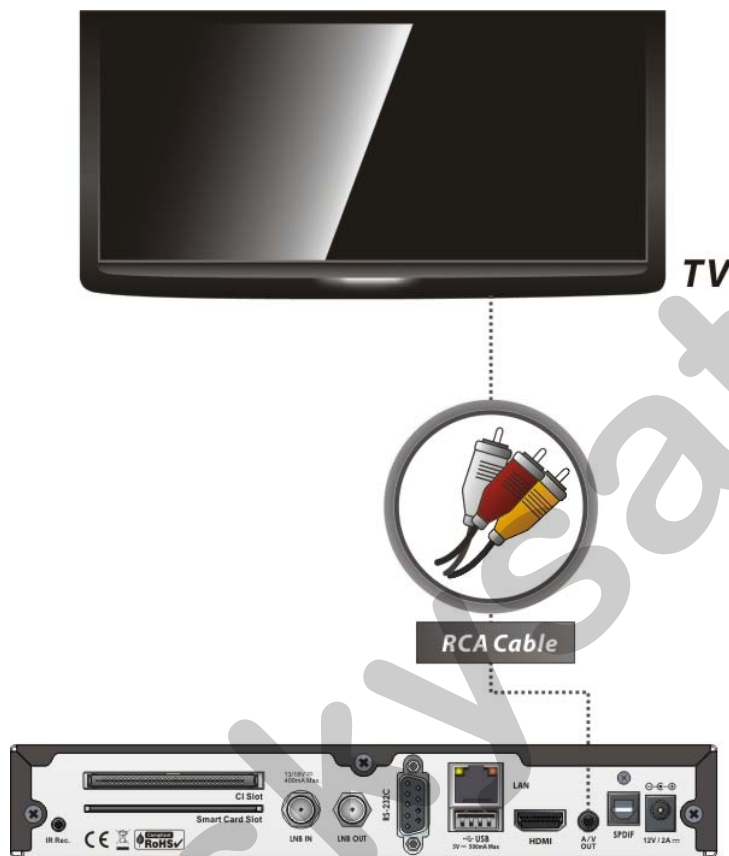
NOTE : Depending on the A/V equipment you own, there are various ways you can connect the STB. To choose the best connection option, please refer to the manual of the equipment you would like to connect to. To get High Definition playback of High Definition content, we recommend that you connect your high definition display with a HDMI cable. HDMI supports standard, enhanced or high-definition video

and multichannel audio in a single cable.

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3. Receiver to TV with Analog A/V Output

- Connect the VIDEO and AUDIO L, R to VIDEO IN and AUDIO L, R IN of TV.



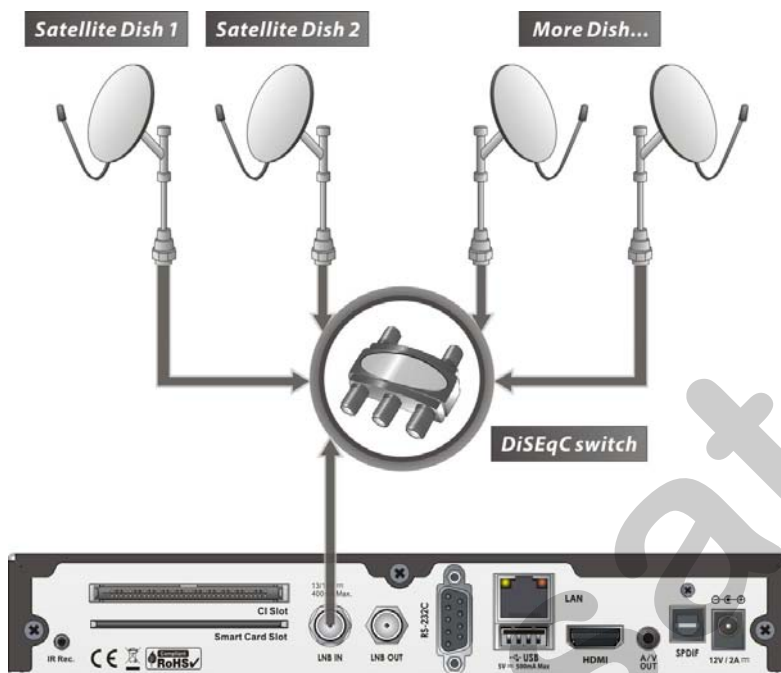
NOTE : The composite connection(RCA cable) is recommended for analogue TV
You cannot view high definition video with the composite video connector.

4. Connecting to Antenna Cable

- Using Single DISH : Connect the Satellite Antenna cable to LNB IN.



- Using DiSEqC switch : Connect the cable of DiSEqC switch to LNB IN.

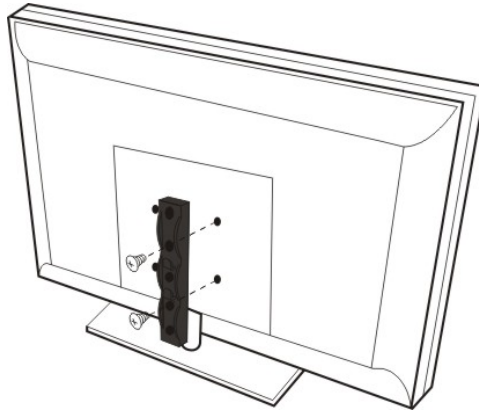


- Using DiSEqC motor : Connect the cable of DiSEqC motor to LNB IN.

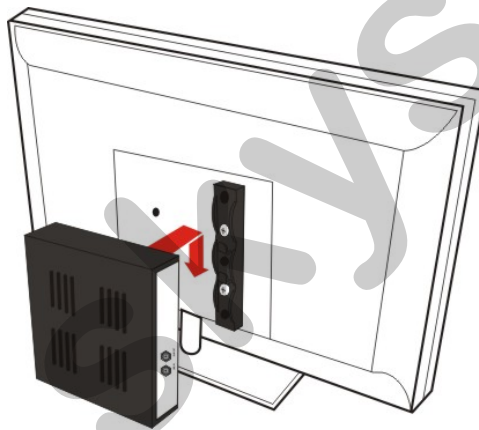


5. Guide to mounting an STB on TV back panel (Optional)

- Install the mount bracket on back panel of TV using the screws provided



- Mount your STB on the bracket.



- Connect IR Extension to the IR Rec Jack on the rear panel.



- **PLACEMENT** : The IR receiver should be located so that it is not directly facing a light source such as lamps or displays. When mounted near a display, it should be flush to the display and away from light reflections that may occur.

Guide of Functions

1. Selecting a Service

To select the desired service (channel), please refer to the instructions below.

1.1 Using CH UP/DOWN buttons

You can navigate between services by pressing **CH UP/DOWN** buttons. Whenever you press the **CH UP(DOWN)** button, current service will be changed to next/previous service. Please press **CH UP** or **CH DOWN** button until you find the service you want to watch.

1.2 Using Service List

To select the desired service in the service list, you should firstly display the service list by pressing the **OK** button.

Use the **ARROW** buttons to select a desired service and press the **OK** button.

You can see that the service is changed in the small screen on the top-right.

To watch that service, press the **OK** button once more.

To watch the previous service, press the **EXIT** button.

In the Service List window, you can also select additional functions with the **COLOR** buttons. Press the **RED** button, and you can sort the services by the Alphabet, Transponder(TP), Group, Tuner and CAS (Conditional Access System).

Press the **GREEN** button, and you can add the services to one of 10 Favorite List.

Press the **YELLOW** button, and you can search & find the service via a virtual keyboard.

Press the **BLUE** button, and you can adjust service list option.



1.3 Using Simple Service List

- If you press **NUMERIC** buttons or **UP/DOWN ARROW** button, instant service list will be displayed.
- Select the desired service by using the **ARROW** button, and press **OK** button to watch.
- You can also enter the service number directly by using the **NUMERIC** button.



1.4 Using Recent Service List

- To display recent service list, press the **RECALL** button for a short time.
- To return to the previous service that you were watching, press **RECALL** button twice or for a longer time.
- Choose the service from the recent service list, use the **ARROW** button to select, and then press the **OK** button.
- Press EXIT button to exit from the recent service list.



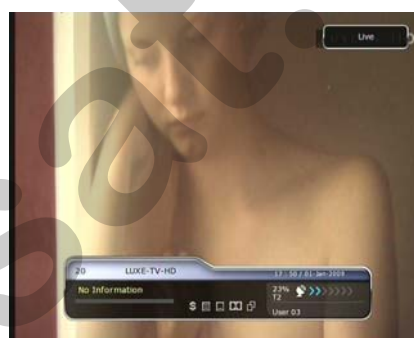
2. Information Window

If you want to view the information of the current service that you are watching, press **INFO** button. Then the Information window will be displayed.

This Information window is automatically displayed when changing between the services.

This window contains much useful information such as service number, service name, scrambled types of service, teletext, subtitle, Audio indication for Dolby Digital, Time duration of the service and so on.

By pressing **INFO** button once again, you can get more detailed information about the service.



3. Multi-Picture Display.

Press the **BLUE** button to display multiple pictures and use the **RED** button to select the display options for 9 or 12 multiple pictures.



4. Electronic Program Guide (EPG)

Electronic Program Guide (EPG) allows you to see program schedule and program information from the service which includes this data as part of their transmission. Multiple services will be shown with a time line of programming events. The EPG supplies additional information of channel service, such as program listings, start/end times and detailed information about the program listings for all available services. The availability and details of information of these program details can be varied, depending on the particular broadcasters, individual services.



- Press the **EPG** button, then the EPG menu will be displayed.
- Use the **ARROW** buttons to move to other services or to see previous/next guide.
- Press the **EPG** button once to view full EPG with multi service list, and press it twice to view the additional EPG information of a specific channel service. Keep pressing the **EPG** button to toggle between the full and detailed menus of EPG.
- Press the **GREEN** button to view next day EPG and the **RED** button to view EPG for a previous day.
- Select the program by using the **ARROW** buttons then set the event timer by pressing **OK**.
- You can schedule a recording with the EPG menu as follows.
 - Press **RECORD** button to schedule the event. This schedule can be checked in the menu of Timer Settings, in the System tool menu.
 - To cancel the schedule of the recording, press the **OK** button for the appointed event.
 - To edit the schedule of the recording, press the **RECORD** button for the appointed event.

5. Favorite Group

Press the **FAV**(Favorite) button to view all favorite groups such as sports, movie, drama, satellite group and so on. Scroll through the various favorite group using the **UP/DOWN ARROW** buttons, and select the desired favorite group by pressing **OK** button.



6. Volume Control

- To adjust the audio volume, press the **VOL UP/ DOWN** buttons.
- Audio volume control bar will be displayed at the top of the screen and disappear after 4 seconds.
- When necessary, press the **MUTE** button to turn on/off the audio sound.

NOTE : The mute function remains set while you change services.



7. Pause

PAUSE button is used to freeze the video. Press **PAUSE** button once more to resume the video.



8. Subtitle

You can select the language for a Subtitle, if the program provides subtitle information.

- Press the **SUBTITLE** button on your remote control unit.
- Select the desired subtitle language then press **OK** button.
- The subtitle will be displayed in the selected language at the bottom of the screen.
- To turn OFF the subtitle from the screen, Select '**Off**' from the subtitle language list.

NOTE : When program does not provide subtitle information, **SUBTITLE** button will not be active.



9. Audio Control

Press **YELLOW** button on live TV service to display Audio Control menu. You can set **Audio Track** / **Sound Mode** / **Sound Level**.

- **Audio Track :**

You can see all the audio track of the service you are watching. Use the ARROW buttons to choose the preferred audio track. If you select Auto, audio track will play as what you set for audio language in language setting menu.



- **Sound Mode :**

To set sound mode, **Stereo** / **Mono** / **Left** / **Right**.



- **Sound Level :**

To set sound level, **Low**(-30%) / **Normal** / **High**(+30%) / **Off**.



10. Teletext

When the **TELETEXT** icon on the INFO Banner, press the **TELETEXT** button to view the teletext.



11. PIP (Picture in Picture)

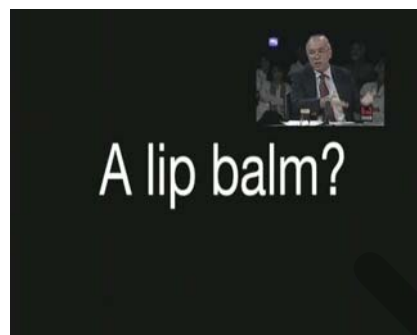
- When you press the **PIP** button, a sub picture screen will appear on the main screen view. If you press the **PIP** button one more time, the primary picture and the sub picture will appear together side-by-side with the same size. The picture of the left side is the primary and the picture on the right side is sub. If you press the **PIP** button one more time, the sub picture will disappear.



- In the PIP mode, you can change primary and sub with the **PIP SWAP** button.

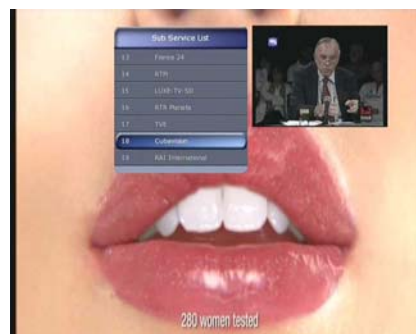


- If you press the **PAGE UP/DOWN** button, the location of the sub picture is changed.



- If you press the **PIP SERVICE LIST** button, you can see the list of services of sub picture. You can change the service of the sub picture from the service list shown.

NOTE : Changing services of sub the picture could be limited by the condition of the tuner connection or a recording event ongoing.



PVR (Personal Video Recorder) Function

1. Recording

You can select a recording storage device with the following sequence :

Menu > Configuration > Recording Option > Record Device.

Default is set to 'USB'.

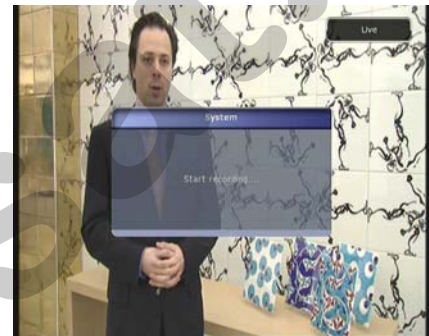
1.1 Recording methods

There are 3 type recording methods.

(Instant Recording / Time Scheduled Recording / Event Scheduled Recording).

- **Instant Recording :**

You may press the **RECORD** button to start your recording instantly at anytime.



- **Time Scheduled Recording :**

- In Timer Settings menu, you may set the time & program to record your desired service program.

(Go to Main Menu > System Tools > Timer Settings)



- Press the **GREEN** button to activate the new timer edit screen.

- In the Timer Edit screen, you may choose start date/time, duration, service, mode, type (Recording/Play), Tuner (Auto/1/2) then simply press the **Yes** button to schedule your recording event. Please note that the minimum offset time of 3 minutes is required from the Start time & current time for appropriate recording process to take place.



- **Event Scheduled Recording via EPG :**

- In the EPG menu screen, you can choose the event you wish to schedule or record.
- While watching the LIVE TV screen, press the **EPG** button to access the EPG menu screen.



- Go to the event which you wish to view at the time indicated on the EPG schedule, then press **OK**. The event will be scheduled with the **BLUE play icon**. This BLUE play icon means that you want to just watch the event at the scheduled time.



- Press the **OK** button one more time, then the event will be scheduled with the **RED dot icon**. This RED dot icon means that you want to record the event at the scheduled time.



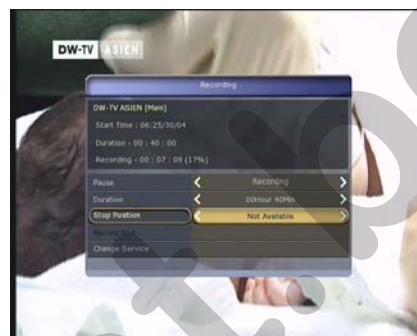
- When you set an event for scheduled recording via the EPG menu. It automatically sets a Timer Event in the **Main Menu > System Tools > Timer Settings**.



1.2 Recording Edit

Press the **REC** button while recording to see the recording message window.

- **Pause** : Select **Pause Recording** then press **OK** to pause the current recording process.
- **Duration** : Set recording duration. Press **LEFT/RIGHT ARROW** button to change recording duration.
- **Stop Position** :
Set the finishing time of recording.
 - **End of current event** : finish recording at the end of current event
 - **End of next event** : finish recording at the end of next event.
 - **Not Available** : EPG is not available.



- **Record Slot** : When you are recording 3 services, you can select Primary / Secondary / Tertiary by pressing **Left/Right Arrow** button, then go to Change Service and press **OK** button to show that recording service.



1.3 Long Time recording

During lengthy time recording processes of 4GB(Giga Byte) or more, additional files may be created per every 4GB. *(For example; aaa.ts, aaa.ts1, aaa.ts2... and so on).*

You must remember not to delete any of duplicated file. These files are only able to be viewed with your PC not with the receiver (STB).

1.4 Pause during recording

- When the **PAUSE** button is pressed during recording, only the live video is paused, but recording is continued at the selected recording device.
(Menu > Configuration > Recording Option > Record Device)



- Press **PAUSE** button once again and event will resume from the pause time.
- During recording, press the **PLAY/TIMESHIFT** button to show the Play bar screen.



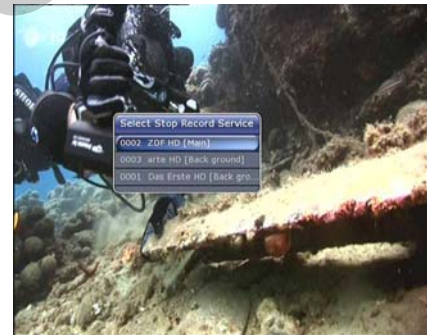
- While the Play bar is shown on your screen, you may use the **LEFT/RIGHT Arrow** button to move (forward & backward) freely within recorded time.
- If you press **YELLOW** button in the Play bar, you can set the Position Jump time at **Auto / 10sec / 30sec / 1min / 2min / 4min / 10min**. Then press **LEFT/RIGHT Arrow** button to jump as you set the time.
- If you press the **STOP** button, it will go to LIVE and you may press **PREV FILE** button to view the recorded file from the beginning.



- STB can record up to 3 different services simultaneously.
- When recording 3 services at the same time, you can press the **STOP** button to see a message window of current recording status / information.

If you select one of the 3 or 2 recordings and press the **OK** button, that recording service will be stopped.

If you press the **STOP** button during recording 1 service, a recording stop message window will appear. Then select **YES** to stop recording.



NOTE : If you want the recording up to 3 services, please format the storage device with 'NTFS' or 'Journaled(JFS)' file system.

Menu > Storage Manager > Format > File System > select 'NTFS' or 'Journaled(JFS)'..

2. Time Shifting

You can select a storage device for a temporary file of the Time shifting with the following sequence:

Menu > Configuration > Recording Option > TimeShift Device.

Default storage device is set to 'USB'



- If pressing the **PAUSE** button during Time shift, the live video is paused but the temporary recording for time shift is continued at the selected storage device.



- Press the **PAUSE** button once again, then the event will resume from the paused time.
- While watching live TV, press the **PLAY/TIMESHIFT** button to show the play bar on your screen.



- When the play bar is displayed on your screen, you may use the **LEFT/RIGHT Arrow** buttons to move freely through the recorded times bar.
- If you press **YELLOW** button in the Play bar, you can set the Position Jump time at **Auto / 10sec / 30sec / 1min / 2min / 4min / 10min**. Then press **LEFT/RIGHT Arrow** button to jump as you set the time.
- If you press the **STOP** button while time-shifting, the screen will be turned to a live TV channel. You can also use **PREV FILE** button to move to a start location of the Time-shifted file.



3. Playback (Play List)

You can playback many files with the Playlist which you access by the **PLAYLIST** button.

In the Playlist, you can check and playback **recorded files**, **multimedia movie files**, **MP3 music files**, and **image files**. With the **LEFT/RIGHT ARROW** button, go to the **Recorded Files**, **Imported Files**, **Music** and **Photo** category and check & for playback files in each category.

If press the **PLAYLIST** button, you can see all playable files. In this mode, **Green** button is not in operation (not working). And when you select the file, you will not be able to select the different types of file format files together at once.

You can press **LEFT/RIGHT Arrow** button to move to **Recorded Files** / **Imported Files** / **Music** / **Photo** / **Play List** menu.



3.1 Recorded Files

- If you press **RIGHT Arrow** button in Play List, you can go to Recorded Files menu.
- Locate the recorded file(s) you wish to play with the **UP/DOWN** button and press the **OK** button to playback the recorded file(s).
- To choose a particular selection of files, select a desired file and press the **RED** button. Press the **OK** button to begin the selected files.
- **Select Device** : Press **PLAYLIST** button one more time in the Playlist mode to see “**Select Device**” window, and select the device which has the file you want to play.

NOTE : “**Select Device**” window shows devices which are currently connected to the STB.



- **Sorting** : If you press the **YELLOW** button, you can sort the files by **Time** / **Name** / **Size** / **Type**.



● File Option :

If you press the **BLUE** button, you can select a option for **Delete, New Folder, Move to Folder, Copy to Device, Rename, Lock/Unlock**. You can select multiple files together and delete or move all of them at once.

- **Delete** : To delete file(s)
- **New Folder** : To make new folder. Default name of the folder is "Group#".
- **Move to Folder** : To move the selected file(s) to a folder you want. This option is available if there is no folder.
- **Copy to Device** : To copy the file(s) to other storage device. This option is not available if only one storage device is connected.
- **Rename** : To rename the folder or file.
- **Lock / Unlock** : To lock and/or unlock the file with your PIN Code. You must select a file to do this option.



3.2 Imported Files

- If you press **RIGHT ARROW** button in Recorded Files, you can go to Imported File menu.
- Locate the file(s) you wish to play with the **UP/DOWN** button and press the **OK** button to enjoy the movie.
- To choose a particular selection of files, select a desired file and press the **RED** button. Press the **OK** button to begin the selected files.
- You can use the same 'Select Device', 'Sorting' and 'File Option' features as in the Recorded Files.



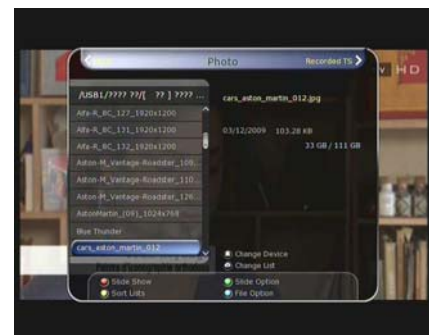
3.3 Music

- If you press the **RIGHT ARROW** button in Imported Files, you can go to Music menu.
 - If you press the **RECALL** button, you can enjoy music with Shuffle playback and repeat.
- You can use the same 'Select Device', 'Sorting' and 'File Option' features as in the Recorded Files.



3.4 Photo

- If you press the **RIGHT ARROW** button in Music, you can go to the Image Photo menu.
- If you press the **RED** button or **OK** button, you can start the slide show of image files. Press the **EXIT** button to stop slide show.
 - **RED button** : Auto Slide show
 - **OK button** : Manual Slide show
- If you press the **GREEN** button, you can adjust the Slide Time, Repetition, Title, Down-scale.
- You can use the same 'Select Device', 'Sorting' and 'File Option' features as in the Recorded Files.



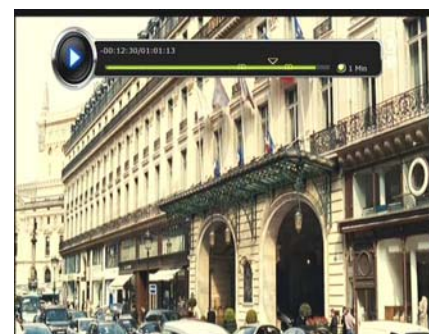
4. Bookmark

- When the Play bar is displayed, you may move to desired time and book mark it by pressing the **RED** button. Bookmark(s) are indicated with a **Green line** on the play bar. Also, you may press the **RED** button to activate the play bar to mark your bookmark(s).
- When the play bar is on, user can move / jump between the bookmarks by pressing the **GREEN**



button.

- If you wish to delete any Bookmarks, go to that bookmark by pressing the **GREEN** button, then press the **RED** button to delete the current bookmarks.



5. Trick mode

- The user can change the speed of a fast forward play with **FF**(Fast Forward) button. Press **FF** button to change the speed to **x2, x4, x6, and x8**. If you once again press **FF** button in its **x8** mode, it returns to normal(x1) speed play.
- You can also change rewind speed with the **REWIND** button. Press **REWIND** button to change the speed to **x2, x4, x6, and x8**. If you press the **REWIND** button again in it is at the **x8** mode, it returns to normal speed.
- You may press the **PAUSE** button at any time to pause a pre-recorded event. Press the **PAUSE** button once again to resume play of the recorded event.



Menu Map

Main Menu	
 System Tools	1. Storage Manager 2. Timer Settings 3. Service List Manager 4. Data Transfer
 Configuration	1. Recording Option 2. Parental Control 3. Display Setting 4. Time Setting 5. Language Setting 6. A/V Output Setting
 Installation	1. Dish Setting 2. Positioner Setting 3. Service Search 4. Network Setting 5. System Recovery 6. System Information
 Utilities	1. Calculator 2. Calendar 3. CAS 4. Plugin 5. YouTube

Main Menu of Guide

To display the menu, press the **MENU** button at any time. You can select the sub menus by using the **ARROW** buttons. The selected sub menu becomes highlighted. After selecting (highlighting) the sub menu you want to access, press the **OK** button. If you want to return to the previous menu, press the **MENU** button. And if you want to exit from the menu, press the **EXIT** button.



1. System Tools

1.1 Storage Manager

The items in this menu allow you to access and control the storage devices that you want.

- **Current Device** : Select the storage device you want to access with the **ARROW/OK** buttons.
- **Status** : You can see the information of current connected devices, such as '**Mounted**', '**Not Available**'
- **File System** : It shows the file system of the current device. You can also select desired file system that you want when you format the device.

NOTE : NTFS is the recommended file system to format, and it will be also recognized in Windows system

- **Total** : Displays total size of current device.
- **Free** : Displays free size of current device.
- **Format** : If you press the **OK** button to format current device, the device will be formatted with above file system.

NOTE : When file system is 'Unknown', the device will be formatted with 'NTFS'.

- **Storage Check** : Check the current connected device.
- **Play List** : Press **OK** button to move to '**Play List**' menu directly.



1.2 Timer Settings

Insert a new timer entry or modify an existing timer entry.

- **To add new timer entry** : Press the **GREEN** button. Timer Edit window will popup. You can set the specific start date, time, duration and service for its reservation. And you can choose one of Timer Modes as '**Once**' or '**Daily**' or '**Weekly**'. You can choose timer operation type as '**Recording**' or just to '**Play**'.
 - If you choose '**Recording**', it will start recording at that time.
 - If you choose '**Play**', it will change and tune to the service that you wish to watch.
 - If you set Alarm Confirm Message to '**On**', alarm message will activate. Or choose '**Off**' to disable.
- **To modify existing timer entry** : Choose the timer entry which you wish to modify and press the **OK** button.
- **To delete an existing timer entry** : Choose the timer entry that you want to delete and press the **RED** button.
- Press **YELLOW** button to enter to Calendar.
- Press **BLUE** button if you want to delete all the event(s).

***NOTE** : If you reserve one or more event through the EPG menu, the reserved event(s) will be added to Timer Settings automatically.*



1.3 Service List Manager

Service List Manager menu will appear when you press the **OK** button. You can select Edit Mode by pressing the **YELLOW** button.

- **Lock Services** : All service lists will be shown on the left side of the window, the middle will show the list of service to be locked. By using the **ARROW** and **OK** buttons, you may move the chosen service to the middle window to lock that service. Services can also be moved back from the middle to the left side to un-lock them.
- **Move Services** : All service lists will be shown on left side of the window, services to be moved will be shown on the middle window. Move the service to the middle window by using the **ARROW** and **OK** buttons, then the middle window service will be moved to a specified location when the desired location is selected from the left window.



- **Delete Services** : All service lists will be shown on left side of the window. By using the **ARROW** and **OK** buttons you may select services to be deleted by placing them in the middle window. The press the **GREEN** button to delete the selected services.



- **Skip Services** : All services will be shown on left side of the window, the middle window will only show the services that are chosen to be skipped. By using the **ARROW** and **OK** buttons you may move the selected services from the left to middle window to skip them.



- **Set Favorite Services** : Use the **ARROW** and **OK** buttons to select your desired favorite group. Once, favorite group is chosen, the left side window will show all service lists and the middle window will only show the selected services of the favorite group selected. By using the **ARROW** and **OK** buttons, you may ADD the desired services to a favorite group or DELETE any from the favorite group. The name of the favorite group can be edited by pressing the **GREEN** button.



- You can go to Select Favorite Group by pressing **GREEN** button. In this mode, you can select **Lock Group** / **Edit Group Name** / **Add Group** / **Delete Group**.

- **Edit Services** : All services name will be shown on the left side of the window. Move the highlighted bar to the service where you want to edit its name and press the **OK** button for Edit Service menu. Then move the highlighted bar which you want to edit. You can edit **Service Name**, **Video Stream Type**, **Video PID**, **Audio Stream Type**, **Audio PID**, **PCR PID**.

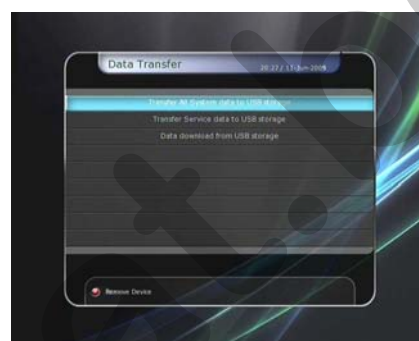


1.4 Data Transfer

When the data transfer task is in process, the Front USB slot is set to a default device slot. But, if no USB device is connected on a front USB slot, then the Rear USB slot is set as a device to be used for the data transfer process.

NOTE : *If no USB device is connected on either two (Front & Rear) USB slots, then a Menu item will not be available.*

- **Transfer all System data to USB storage :** If you want to transfer and use BOTH of the current system parameters and service data in the future, this menu will allow you to store all data to your USB device. Press **OK** button to store all current data to an external USB storage.
- **Transfer Service data to USB storage :** If you want to transfer and use ONLY the service data in the future, this menu allows you to store current service data. Press the **OK** button to store the current service data to your external USB storage. The service data can also be viewed and edited on a PC with an appropriate editor (DrEdit) for the file saved.
- **Data download from USB storage device :** This menu allows you to download the saved data from the external USB storage to your STB. Press **OK** button to download data.



2. Configuration

2.1 Recording Option

- **Alarm Confirm Message** : Turn '**ON**' this Alarm message to indicate and show the alert pop-up message when there is a reserved recording event. The alert message will show 3 minutes before the starting time of the reserved recording event.
- **Recording Stop Message** :
 - **Set 'On'** : When you press the **STOP** button while recording, then a confirmation window is displayed.
 - **Set 'Off'** : When you press the **STOP** button while recording, the STB will stop the recording process immediately / instantly without asking the additional confirmation from the user.
- **Extra Recording Time Before(Start) & After(Finish)** :
 - You can add an extra recording time before start / after finish (**1min / 2min / 3min / 4min / 5min / 10min / 15min / off**) to scheduled recording events. If you set an extra recording time by using the **ARROW** and **OK** buttons, the scheduled recording event will have a '**Start**' / '**Finish**' time of additional recording time added to the basic event. This option only works for real time events. But, when you schedule a service recording in the Timer Settings menu, this option has no affect.
- **TimeShift Start** : You can choose the method of TimeShift function.
 - **Auto** : TimeShift function is automatically activated.
 - **Off** : TimeShift function will be disabled.
 - **Manual** : TimeShift will be activated when the **Pause** key is pressed.
- **TimeShift Duration** : You can adjust TimeShift duration in 30 minute intervals. (**Off / 30min / 60min / 90min / 120min**). This duration defines the maximum time length of the TimeShift as long as the storage device has enough memory space left.
- **Playback Position Jump** : When you use **LEFT/RIGHT ARROW** button to move back/forward through the recorded time bar, You can select the time intervals. (**10 Sec / 30 Sec / 1Min / 2 Min / 4 Min / 10 Min / Auto**).
- **Playback Numeric Function** : This selection of function defines the operation type of the **NUMERIC** buttons of your remote control unit (RCU) while the '**Playbar**' is displayed on the screen.
 - **Commercial Skip** : When the **NUMERIC** buttons (1 to 9) are pressed the video will move forward according to the **NUMERIC** buttons pressed. For example ; when '**1**' is pressed, 1min move forward, '**5**' is pressed, 5min move forward from current position. When '**0**' is pressed, it will move back for 1minute.
 - **Percentage Move** : When the **NUMERIC** buttons are pressed, the video will move to the location of that % percentage of numbers pressed. For example ; if you press '**10**', you will move to the 10% location of the total video length. If you press '**99**', you will move to the end of the video clip recorded.
- **TimeShift Device** : You can select the TimeShift Device you wish to use.
 - USB Network Drive.
- **Record Device** : You can select the Recording device you wish to use.
 - USB Network Drive.



2.2 Parental Control

User's access rights to a service and programs are controlled by a 4-digit secret code that is defined by the user. Whenever you attempt to access the parental control menu, a pop-up window will ask you to input a **PIN code**. (If necessary, you can change it.)

NOTE : The default PIN code is '0000'

- **Censorship** : Set the parental guidance rating of highlighted censorship classification. The parental level is given as an age-based number.
- **Change Pin code** : To change your PIN code, input the new PIN code using the **NUMERIC** buttons. To verify the new PIN code, input the new PIN code again.
- **System** : Set the access rights to the System menu.
- **Installation** : Set the access rights to the Installation menu.
- **Configuration** : Set the access rights to the Configuration menu.
- **Edit Service** : Set the access rights to the Edit menu.
- **Plugin** : Plugin Set the access rights to the Plugin menu.



2.3 Display Setting

- **Info Box position** : Set a position of the information window.
- **Info Box Display Time** : Set the time duration of the information window being displayed on the screen after changing services.
- **Info Box Event Type** : Set the event type that display in left bottom part of the information window.
 - **Present Event with Time** : Display the present event name with time. (Default)
 - **Present and Follow Event** : Display the present and following event name.
- **Volume Bar Display Time** : Set the time duration of the volume bar being displayed on the screen after changing audio volumes.
- **EPG Time scale** : You can set the time scale in hours which is displayed for a program in the EPG window.
- **Start MHW-Epg Automatically** : You can set on MHW-Epg to start automatically.
- **Zapping Mode** : You can set the zapping mode as follows (zapping mode is when changing services).
 - **Black screen** : Display a black screen when changing between services.
 - **Freeze** : Display the last still picture when changing services.
- **Simple Service List** : To set the simple service list '**On**' to display or '**Off**' :
 - **On** : Press **UP/DOWN ARROW** button to display the simple service list while watching live TV.
 - **Off** : If you set Off, channel Up/Down when you press **UP/DOWN ARROW** button.



2.4 Time Setting

- **Time Setting** : To set the current time, you can use two modes; **Auto** or **Manual**.
- **Local Offset** : Enter the offset value by using the standardized information of current service area.
- **Daylight Saving** : If you want to apply daylight saving, select the counter by using the **ARROW** buttons.
- **Clock Mode** : Select the type of clock display(12 Hours or 24 Hours) using **ARROW** buttons.
- **Wake Up Mode** : Enter the time for the receiver to automatically power **ON**. And you can choose one of Wake Up Mode as '**off**' or '**Once**' or '**Daily**' or '**Weekly**'.
 - **Wake Up Date** : Select the date when the STB is turn on. Press the **OK** button to display calendar.
 - **Wake Up Days** : Select a day of the week when the STB is turn on.
 - **Wake Up Time** : Enter the wake up time of the STB using the **NUMERIC** buttons.
 - **Wake Up Service** : Select the service when the STB is turn on. Press the **OK** button to display the service list.
- **Sleep Mode** : Enter the time for the receiver to automatically switch **OFF** and go to standby mode. And you can choose one of the Wake Up Mode as '**off**' or '**Once**' or '**Daily**' or '**Weekly**'.
 - **Sleep Date** : Select the date when the STB is turn off. Press the **OK** button to display the calendar.
 - **Sleep Days** : Select a day of the week when STB is turn off.
 - **Sleep Time** : Enter the turn-off time of the STB using the **NUMERIC** buttons.



2.5 Language Setting

- **Menu Language** : Select the desired menu language by using the **ARROW** buttons.

NOTE : The menu and operation languages can be changed depending on the country sold. Available languages are subject to change without prior notice.

- **Audio Language** : Select the default language for the audio when changing services. If no other language is provided, then the default language of current will be automatically selected.
- **Subtitle Language** : Select the default language for subtitle when changing service.
- **Teletext Language** : Select the default language for Teletext.
- **User Font file** : Select a font you want to use.



NOTE : To show and use the User Font, please install a desired font file(*.ttf) to the /Var/Font directory(folder) in your PC which is connected with your receiver(STB) by network. Then press **LEFT/RIGHT** button to select a font and press **OK** button.

2.6 A/V Output Setting

- **TV Type** : Select the TV types.(PAL/NTSC/Auto) In Auto mode, the STB is automatically selected to NTSC or PAL accordingly to the service played.
- **TV Aspect Ratio** : Select the aspect ratio of TV which is connected to the STB (4:3/16:9). This menu must be set prior to selecting the Display Format function.
- **Display Resolution** : Select the Display Resolution of the screen by using **ARROW** or **OK** button. You can also change the resolution with **Resolution** button in the remote. Each time you press the **Resolution** button, the resolution changes in the following sequence: **576i** > **576p** > **720p** > **1080i** > **1080p**.



NOTE : Please note that your TV may not show a picture depending on the Display Resolution set by your STB as well as if set to PAL when NTSC is required or vice versa. If you set the Display Resolution as HD(more than 576p), your TV cannot display anything when the TV is connected to the Composite Video output of the STB. In case of HDMI, your TV can display a picture for all of the resolution settings of the STB. But it is also possible that your TV may not display a picture with 576i, because some HDTV's does not support 576i.

- **Display Format** : In case of a 4:3 ratio TV set, you can select **Letter Box** or **Pan&Scan**. In case of a 16:9 ratio TV set, you can select **Pillar Box** or **Full Screen**.
 - **16:9 Display format on 4:3 TV set**
 - Letter Box** : You can see the full screen of 16:9, but top and bottom edges of your TV screen display black horizontal Pillars.
 - Pan&Scan** : The picture is displayed in full on your 4:3 TV screen, but left and right sides of the original picture cannot be displayed.
 - **4:3 Display format on 16:9 TV set**
 - Pillar Box** : You can see the full screen of 4:3, but left and right sides of your TV screen display black vertical Pillars. 4:3
 - Full Screen** : The picture is displayed in full on your 16:9 TV screen, but left and right sides of the original picture is displayed with widening of the screen from left and right. Because of the artificial widening, the TV picture will be distorted.
- **Video Output Mode** : According to Display Resolution, you can select the **Video Output Mode**.
 - **In case of More than 576p(HD)** : The 'RGB' output will be disabled automatically.
- **HDMI Dolby Digital** : Set the Dolby Digital mode 'On' or 'Off' in status of HDMI output.
- **Dolby Digital Default** : Set the Dolby Digital Default mode 'On' or 'Off'. If you set 'On', Dolby Audio will play on the service that support Dolby Audio.
- **Sound Mode** : Set the audio mode output among the RCA jack, optical SPDIF and HDMI (Stereo/Mono/Left/Right).
- **Power Saving in Standby Mode** : You can select the Power Saving in standby Mode.
- **Audio Sync Delay** : To adjust Audio Sync. You can adjust from 0ms to 400ms.

3. Installation

3.1 Dish Setting

Select the satellite/antenna and LNB settings for service search. The values that are set in this menu will be available for selection in other service searching menus.

- **Satellite** : Select the satellite which you want to do a search for.
 - Press the **LEFT/RIGHT ARROW** button to select the satellite.
 - If you press the **OK** button, the entire satellite list will be displayed.
 - Select the desired satellite name to search.
 - If the desired satellite name is not listed then select User Defined.
- **Frequency** : Select the satellite frequency which you want to use for checking the signal.
- **LNB Power** : Select the LNB power on or off.
- **LNB Type** : Select the LNB type.
- **LNB Frequency** : Select the local oscillator (L.O.). frequency that is specified for the LNB used..
 - Use the **LEFT/RIGHT ARROW** buttons to select the LNB frequency.
 - If the required LNB frequency is not listed, then enter the frequency manually using the **NUMERIC** buttons.
 - When you select Universal LNB type, both 9750 and 10600 are supported at the same time. And then the LNB 22KHz setting is disabled.
- **LNB 22KHz** : When you use a separate coax 22 KHz tone switch box, make the 22 KHz tone switch enabled or disabled to select the input you desire of the tone switch.
- **DiSEqC Switch** : If you use **DiSEqC 1.0** or **DiSEqC 1.1** switch, select one of the DiSEqC inputs.
- **Service Search** : Press the **OK** button to move to the Search Menu



3.2 Positioner Setting

- **Satellite** : Select the satellite which you want to search for the Service.
 - Press the **LEFT/RIGHT ARROW** button to select the satellite.
 - If you press the **OK** button, a complete satellite list will be displayed.
 - Select the wanted satellite name.
 - If the desired satellite name is not listed then select User Defined.
- **Frequency** : Select the satellite frequency you want to use to check for a signal.
- **Positioner** : Select the positioner.
 - **None : (No Positioner)**
 - **Using DiSEqC 1.2 :**
 - Move** : To move the dish, press **LEFT/RIGHT** button.
 - Fine Move** : To move the dish in smaller steps, press the **LEFT/RIGHT ARROW** button.
 - Step** : Set to positioner moving steps as 1, 2, 3, 4
 - Positioner Command** : To use various positioner commands, press the **OK** button. Then, available positioner commands will appear.



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- **Using USALS :**

Dish Longitude : Enter the longitude position of the antenna using the **NUMERIC** buttons.

Dish Latitude : Enter the latitude using the **NUMERIC** buttons.

Go To : Press the **OK** button to rotate the dish to the selected antenna position.

Positioner Command : To use various positioner commands, press the **OK** button. Then, available positioner commands will appear.



- **Dish Setting :** Press the **OK** button to move to *Dish Setting* menu directly.
- **Service Search :** Press the **OK** button to move to *Service Search* menu directly.

3.3 Service Search

● **Auto Search Mode :**

- **Satellite :** Press the **OK** button to select the target satellite to be searched.
- **Search Type :** Select the search type.
- **Network Search :** You can select Off or On. When you select 'On', you can find more transponders using the home network. As it refers to NIT during searching, if there is the frequency information of other transponder, it searches the other transponder besides the transponder that the user inputs.
- **Time Calibration :** You can select 'Simple', 'Full' and 'Off' to get TDT(Time Data Table) from each TP
- **Dish Setting :** Press the **OK** button to move to Dish Setting menu directly.
- **Positioner Setting :** Press the **OK** button to move to the Positioner Setting menu directly.
- **Start Search :** Press the **OK** button to start search.



● **Manual Search Mode :**

- **Satellite :** Press the **OK** button to select the target satellite for search.
- **Frequency :** Select the frequency from the list to search.
- **Symbol rate :** Enter the symbol rate using the **NUMERIC** buttons.
- **Polarity :** Select the polarity. (**Vertical/Horizontal**)
- **Search Type :** Select the search type.
- **Network Search :** You can select Off or On. When you select 'On', you can find more transponders using the home network. As it refers to NIT during searching, if there is the frequency information of other transponder, it searches the other transponder besides the transponder that the user inputs.
- **Dish Setting :** Press the **OK** button to move to the Dish Setting menu directly.
- **Transmission :** You can select 'DVB' and 'DVB-S2'
- **Start Search :** Press the **OK** button to start a search



● **Blind Search Mode :**

- **Satellite :** Press the **OK** button to select multiple satellites.
- **Frequency :** Set **Auto** to search whole frequency, Set **Manual** to search only desired frequency.
- **Polarity :** Select the polarity. (**All Polarity/Vertical/Horizontal**)



- **Search Type** : Select the search type.
- **Dish Setting** : Press the **OK** button to move to the Dish Setting menu directly.
- **Start Search** : Press the **OK** button to start a search.

● **Fast Scan :**

- **Select operator** : Press the **OK** button to select Operator.
- **Select HD/SD Service** : Press the **OK** button to select HD/SD Service.
- **Start Search** : Press the **OK** button to Start Search.



● **Advanced Search Mode :**

- **Satellite** : Press the **OK** button to select the target satellite for search.
- **Frequency** : Select the frequency from the list to search.
- **Symbol rate** : Enter the symbol rate by using the **NUMERIC** buttons.
- **Polarity** : Select the polarity. (**Vertical/Horizontal**)
- **Video PID** : Enter the video PID using the **NUMERIC** buttons.
- **Audio PID** : Enter the audio PID using the **NUMERIC** buttons.
- **PCR PID** : Enter the PCR PID using the **NUMERIC** buttons.
- **Transmission** : You can select 'DVB' and 'DVB-S2'
- **Start Search** : Press the **OK** button to start a search.

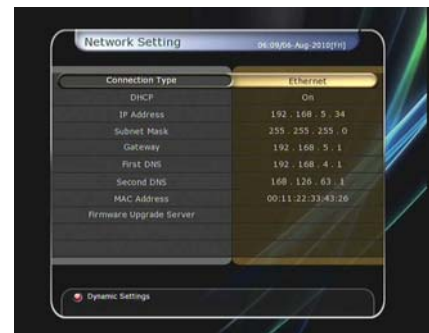


3.4 Network Setting

To use a Network connected to the STB Ethernet port, you have to prepare the STB Network settings. When the STB and a PC are connected via a network, you can access the files of the STB storage device such as USB storage device.

NOTE : If you use DHCP function of router, you can set easily network configuration.

- **DHCP** : You can select **On/Off** for the Dynamic Host Configuration Protocol (DHCP) to get the all configuration from the router.
 - **If you select 'On'** : You will obtain the configuration from network and be set up automatically. In this case, the remaining item (**IP Address, Subnet Mask, Gateway, First DNS, Second DNS**) are automatically set and you don't have to configure them manually.
 - **If you select 'Off'** : You have to input the IP address manually together with the following data.
 - **IP Address, Subnet Mask, Gateway, First DNS, Second DNS** : You can input the address with the **OK** button, **NUMERIC** buttons and the **LEFT/RIGHT** buttons. You can move to the next item of Subnet Mast with the **DOWN** button and you can configure the following items in the same way.
- **Firmware Upgrade Server** : To upgrade the firmware by downloading from a internet server.



NOTE : Server installation and settings must be controlled by expert server manager. A storage

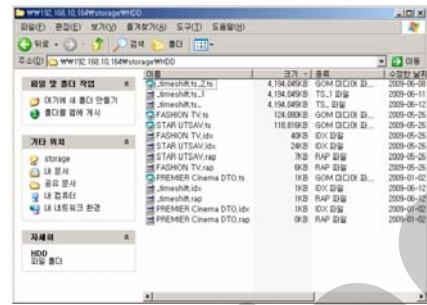
device must be connected with your receiver(STB) when firmware upgrade from server.

- **MAC Address :** This will display the MAC address of the STB Ethernet interface and is a fixed assignment unique to each STB.

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- **Control of the files via the network and your PC :**

- Check the IP Address of the STB on the Network Setting menu.
- Press Enter button on your PC, after writing IP Address on the web browser address line. Ex.) \\168.158.10.146\storage
- You can see the folder name of USB in the Storage folder.
- **USB** : Rear USB Storage Device
- You may be able to load and retrieve data between the PC and the STB via the browser



- **Dynamic settings (RED key)**

- You can make your DDNS setting in this menu by pressing the **RED** colored button.
- For more details about your DDNS settings, please ask your local DDNS service provider.



- Wireless LAN can be supported by using the '**USB to Wi-Fi**' module connected (*Option)

- By pressing the **BLUE** colored button, you can automatically find and do the settings for AP.
- For the details of Wireless Wi-Fi settings, please refer to the additional AP manual.



NOTE : The speed of Wireless LAN is slower than the Wired LAN. So, it could take much more time when a file copy / move functions are performed.

NOTE : Inevitably, only the limited types of Wireless LAN modules are supported. So, you **MUST** check for the compatible / supported types **BEFORE** you purchase. Currently supported types are : RT73 series, RT3070 series, RT2870 series.

3.5 System Recovery

- **System restore to factory default** : Restore the factory set values in case the user has encountered some problems after changing any new parameters of service data and other parameters which may be in error. Press the **OK** button to erase all services and restore default setting.
- **Reset Configuration data** : Maintain the service data and reset the configuration data.
- **Reset Service data** : Maintain configuration data and reset the service data.
- **System restore to stored position** : Restore the stored values including service data and system parameters. Press the **OK** button to restore all data.



- **Store system data** : If you want to use system parameters and service data in the future, this menu allows you to store current state. Press the **OK** button to store current state.
- **Delete store position** : Delete stored system data.

3.6 System Information

This menu displays general information about the hardware and software version of your receiver.

4. Utility

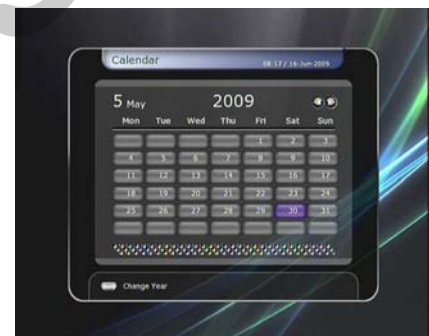
4.1 Calculator

To use the calculator, highlight the calculator and press the **OK** button.



4.2 Calendar

To display the calendar, highlight the calendar and press the **OK** button. Utilize the **ARROW** buttons to choose the date. If you press **PAGE UP/DOWN** button, you can see the past/next month of the calendar.



4.3 CAS (Conditional Access System)

- **Smart Card Slot**

- **Conax smart card menu** :

To watch scrambled services, you need to have an appropriate Conax smart card from the service providers. Insert a valid smart card into smart card slot (only the bottom slot of the two is active). The message of 'Smart card Initializing...' will appear on the screen. After the message disappears, you can watch the service you want.

- **Smart card information** :

You can view the current status of smart card. Select the slot which you want to view using the **ARROW** buttons. And press the **OK** button.

- **CAM Initializing**

To watch scrambled services, you need to have a Common Interface Conditional Access Module(CAM) and an appropriate smart card from the provider. Insert the CAM together with a valid smart card into CI slot (two slots available). The message of '**CI Initializing...**' will appear on



the screen. After the message disappears, you can watch the service you want.

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- **CAM information**

You can view the current status of CAM. Select the slot which you want to view using the **ARROW** buttons, and press the **OK** button. If the CAM is available, you can view information about each slot.

NOTE : The displayed information of each CAMs may be different depending on the CAM used.



- **CI message**

- **On** : To display the CI message on live TV service.
- **Off** : To disable the CI message on live TV service.

4.4 Plugin

If you have the program file for **Plugin**, you can download the file(s) to **Plugin** then enjoy the program.

- **Download Plugin File**

- In the USB storage, please create a new folder name '**plugin**' and in this '**plugin**' folder, create a folder name '**bin**'. (**plugin** > **bin**)
- Store(Copy) the **plugin** file in the '**bin**' folder.
- Connect the USB storage to the receiver. When Software Download menu is appeared, then press **LEFT/RIGHT ARROW** buttons to move to User Data Download mode.
- Press **RED** button to start download the **plugin** file that you want.



NOTE : You can also download by Menu > System Tools > Data Transfer > Data download from USB storage.

- **Plugin Menu**

- **RED button** : To set the plugin Start Type. You can select Auto or Manual.
- **GREEN button** : To Start the plugin. You will see '**Started**' in State if the plugin is started.
- **BLUE button** : Press **BLUE** button if you want to delete the plugin file.



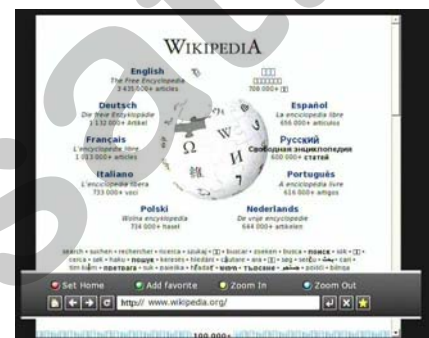
- We provide a special feature called **WebZeal** which is for Web-Browsing. You can simply enjoy the WebZeal when you want web surfing.

- Executing **WebZeal** with USB Storage device
 - Stored the WebZeal file to the USB storage device.
File name : '**WebZeal-201xxxxx.mnt**'.
 - Connect the USB storage device to your receiver then go to **Menu > System Tools > Storage Manager**.
 - Set the Current Device to File Mount Drive.
 - Set the Mount File Name to WebZeal-201xxxxx.mnt
 - Press Connect then go to **Menu > Utilities > Plugin** to start the WebZeal.



NOTE : If you are using WebZeal by File Mount Drive, current USB storage device will not allow to use PVR functions such as recording and time-shift. But it can be use when WebZeal is not in use.

- **WebZeal Option**
 - **RED button** : Press to set the current web page as home.
 - **GREEN button** : Press to add the current web page to favorite.
 - **YELLOW/BLUE button** : Press to adjust the page Zoom In and Zoom Out as you want.
 - **MENU button** : Press **MENU** button to show simple internet menu.



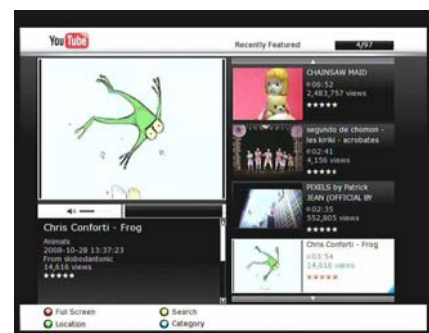
4.5 YouTube

- **Required settings** : Before you can enjoy the **YouTube** feature with your STB, please make sure of the following conditions.
 - Set-top-box should be connected with Ethernet cable, with proper network settings. (Please refer to the menu of "**Network setting**", and its operation instructions).
 - Sufficient buffering with storage memory (USB) is needed ;
 - You can plug in an USB memory of suitable memory size for buffering.

NOTE : a) *Minimum required USB memory size for buffering depends on the size of the contents that you wish to watch from the YouTube service. So in general, it is recommended to use a bigger and sufficient sized USB memory for enough buffering.*

b) *Problems due to network environment : Problems such as flickering and freezing of the screen can occur while you are watching the YouTube service. These kind of problems can often occur due to the lagging and slow speed of the network status from your internet service provider at home. This may also cause the STB to be halted, then we kindly recommend to reset to STB power for rebooting and continue using.*

- **About YouTube feature**
 - YouTube menu is located in the '**Menu > Utilities > YouTube**'.
 - On the right side of the screen, you can see the list of thumbnails of the contents.
 - Press the **PAGE UP/DOWN** buttons to navigate quickly in the service list on the right.
 - On the left side of the screen, the detailed information



- of the selected thumbnail is being displayed.-
- Use the **ARROW** buttons to navigate through the menu
 - And press the **OK / Play** buttons to start viewing the selected content.
 - While playing, use the **PAUSE / STOP** buttons to pause, or stop playing the service.
 - Trick play modes (**FAST FORWARD / REWIND**) are not support in the STB's YouTube menu.
 - Use the **VOLUME UP / DOWN / MUTE** buttons to adjust the audio sound.
 - Press the **MENU / EXIT** buttons to exit from the service, or to the menu while you are watching the service.
- Using the Hot (colored) buttons in the YouTube menu :
 - **RED (Full screen)** : Press this button to view the service in full screen size. This button only functions while the service content is being played.
 - **Yellow (Search)** : Press this button and input the name of the content that you wish to search in YouTube. When the virtual keyboard is displayed, you can also use the dedicated hot colored buttons for each functions.
 - **Green (Location)** : Press and choose your location from the list of world-wide, and many country names in this list. Based on your selected location, corresponding contents list will be provided.
 - **Blue (Category)** : Press this blue button to view the list of categories, then choose the one you prefer to view the list of contents in the selected category.

Troubleshooting

Problem	Solution
Does not display any message on the front panel.	✓ Check the main power cable and check that it is plugged into a suitable power outlet. ✓ Check the STB main power switch 'ON' at the rear of the STB.
No Picture	✓ See 'Does not display any message on the front panel' above. ✓ To match the STB system with your TV system (PAL/NTSC), press <i>V.Format</i> button until a picture is displayed. ✓ Check the video output port is firmly connected to the TV or VCR. ✓ Check that you have selected the Video Input on your TV. ✓ Press the STB button on the remote to assure you are controlling the STB and no other device with the remote. ✓ Check the brightness level of the TV. ✓ Check the resolution that your TV supports, and set the proper resolution with the remote <i>Resolution</i> button to obtain a picture.
Poor picture quality	✓ See 'No Picture' above. ✓ Check the signal level, if this is low then tries adjusting the alignment of your dish.
No Sound	✓ See 'No Picture' above. ✓ Check the volume level of the TV and STB. ✓ Check the Mute status of the TV and STB.
Remote Control does not operate	✓ Point remote control directly towards the STB. ✓ Check that the STB button lights up when you press any button ✓ Check and replace batteries.
No or Bad Signal	✓ Check the LNB ; Replace the LNB if necessary. ✓ Check the cable from the LNB. ✓ Check the position of the dish; realign dish if necessary. ✓ If you are using a DiSEqC 1.0 switch, check that you have connected and programmed the LNBs to the correct connections on the switch. ✓ Check the 'Signal Level' and the 'Signal Quality'.

Specifications

Tuner & Channel Decoder

Input Connector	F-type, IEC 169-24, Female
Loop through out	F-type, IEC 169-24, Female
Frequency Range	950MHz ~ 2150MHz
Input Impedance	75Ω, unbalanced
Signal Level	-65 to -25dBm
LNB Power	13/18VDC, max.400mA
22KHz Tone	(22±2)KHz, (0.6±0.2)V
DISEqC Control	V1.0/1.2/USALS Compatible
Demodulation	QPSK / 8PSK
Input Symbol Rate	2 ~ 67.5 Ms/s(QPSK of DVB-S) 2 ~ 52.5 Ms/s(8PSK of DVB-S2)
FEC Decoder	1/2, 2/3, 3/4, 5/6 and 7/8 with Constraint Length K=7(DVB-S) 3/5, 2/3, 3/4, 4/5, 5/6, 8/9 and 9/10 (DVB-S2)

MPEG Transport Stream A/V Decoding

Transport Stream	H.264(MPEG-4 part 10, MPEG-4/AVC and H26L) MPEG-II ISO/IEC 13818-2/11172-2
Profile Level	MPEG-4/AVC MP@L4, MPEG-II MP@HL
Input Rate	Max. 80Mbit/s
Video Formats	4:3 Letter Box, 4:3 PanScan, 16 : 9
Video Resolution	720 x 576i, 720 x 576p, 720 x 480i, 720 x 480p 1280 x 720p, 1920 x 1080i, 1920 x 1080p(supports only HDMI)
Audio Decoding	Dolby Digital, MPEG-1 Layer 1,2 and 3
Audio Mode	Stereo/Joint stereo/Mono, Dolby AC-3
Sampling Rate	32KHz, 44.1KHz and 48KHz(According to input)

Main System

Main Processor	STi chipset
Memory	Flash-ROM : 32 Mbyte SDRAM : 256 Mbytes EEPROM : 256 bytes

Audio / Video & Data IN/OUT

RCA	CVBS Video Output, Audio L, R Output
HDMI	Video & Audio Output
OPTIC	AC-3 Dolby Digital (SPDIF)
RS-232C	9 pin D-SUB (Male) type, Transfer rate 115Kbps
USB	USB 2.0 Host Support
Ethernet	TX 10/100M Base
IR extension	Removable IR extension

Front / Rear Panel

Slot	Common interface & 1 Smart Card Slot (Rear)
Buttons	3 Buttons(Standby, CH UP/DOWN)
Indicators	1 LEDs(Standby, Power and Remote : DUAL TYPE)

Power Supply

Input Voltage	AC 100 ~ 240V, 50/60Hz
Type	ADAPTOR (12V,2A)
Power Consumption	Max.24W
Protection	Separate Internal Fuse & Lighting protection

Physical Specification

Size (W x H x D)	220mm X 35mm X 145mm
Weight (Net)	0.6 Kg
Operating Temp.	0°C ~ +45°C
Storage Temp.	-10°C ~ +70°C

Memo

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Full HD Digital Satellite Receiver

Sky Sat Mini HD PVR Ready